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REMARKS/ARGUMENTS

Claims 1-24 are pending in the instant application. Claim 8 and 10-24 have been withdrawn from consideration and subsequently canceled by Applicants in this response. Claims 1-7 and 9 have been rejected. Claims 1 and 9 have been amended. Reconsideration is respectfully requested in light of the following remarks.

I. Finality of Restriction Requirement

The Examiner has made final the Restriction Requirement mailed November 12, 2002. Therefore, in an earnest effort to advance the prosecution of this case, Applicants have canceled nonelected claims 8 and 10-24, without prejudice. In light of the finality of this Restriction Requirement, Applicants reserve the right to file a divisional application to the canceled subject matter.

II. Amendment of title

The Examiner suggests that the title is not descriptive and has required a new title indicative of the invention in which the claims are directed. Therefore, in an earnest effort to advance the prosecution of this case and in accordance with the Examiner's suggestion, Applicants have

amended the title to be descriptive of the invention to which the claims are directed. Specifically, the title has been amended to "METHODS FOR THE TREATMENT OF A CONDITION REMEDIABLE BY ADMINISTRATION OF A SELECTIVE ANDROGEN RECEPTOR MODULATOR".

III. Information Disclosure Statement

The Examiner suggests that the Information Disclosure Statements filed 10/15/01, 8/23/02 and 10/11/02 failed to comply with the provisions of 37 C.F.R. 1.97, 1.98 and MPEP 609.

Specifically, the Examiner suggests that the 10/15/01 IDS failed to comply because references AA and AB were never published. It is respectfully pointed out, however, that these are pending U.S. patent applications. They have been identified in the Information Disclosure Statement in accordance with the requirements of 37 C.F.R. 1.98 by the inventor, application number and filing date. Further, the instant application claims priority to the provisional applications from which references AA and AB claim priority. Thus, in accordance with 1.98(d) Applicants do not believe that copies of such applications need be provided.

However, in an earnest effort to facilitate the prosecution of this case, Applicants are providing herewith copies of these pending U.S. Applications. Since Applicants' IDS submitted 10/15/01 clearly constituted a bona fide attempt to comply with 37 C.F.R. 1.98, it is respectfully requested that these applications be considered and entered into the record of this case.

Applicants are also submitting herewith a Supplemental IDS and the requisite fee citing U.S. Patent Application Serial No. 10/322,306 and 10/322,077. These are continuation-in-part applications of U.S. Patent Application Serial No. 09/885,798 and 09/885,381, respectively, which were cited in the IDS submitted October 15, 2001 by Applicants.

The Examiner also suggests that the 8/23/02 IDS failed to comply because references BM, BN, BP, CF-CI, CV-CX, FS-FU, and FW-FX are in a foreign language and references JA-JB, KA-KB, KO-KP and KR-KS do not have a listed publication date.

It is respectfully pointed out, however, that English Abstracts summarizing the teachings of each of references BM, BN, BP, CF, CH, CI, CW, CX, FS, FT, FU and FX and, thus, a concise explanation of their relevance with respect to the instant invention were provided with the 8/23/02 IDS, thus

meeting the requirements of 37 C.F.R. 1.98 3(i). With respect to references CG and FW, English Abstracts indicative of their relevance with respect to the instant invention are being provided herewith. With respect to reference CV, it is respectfully pointed out that the corresponding European applicantion EP277476 was also provided as reference CE in English. Consideration of these references is therefore also respectfully requested.

With respect to publication dates for references JA and JB, these are clearly indicated on the Chemical Abstracts submitted with the IDS as 1959 and 1966, respectively.

With respect to references KA, KB, KO, KP, KR and KS, these are copies of results from searches performed by Applicants. Copies of those references identified from these searches, which were separately then ordered and obtained by applicants were also provided in the IDS. For example, U.S. Patent 3,261,845, identified in search KA is provided as reference FO of the IDS. WO 2000/06525, WO 98/16830, U.S Patent 3,998,833, U.S. Patent 3,821,232, U.S. Patent 3,965,264, U.S. Patent 4,089,650, U.S. Patent 3,923,490, U.S. Patent 3,997,293, Chen et al. 1999, Kirby et al. 1985, Tosunyan et al. 1992, Krow et al. 1982, and U.S. Patent

4,892,578 identified in search KB are provided as references EE, DQ, BG, BC, BE, BH, BD, BF, HQ, HT, HS, HV, and CS, respectively. Wijnberg et al. 1982, Grogan et al. 1963, Bockstahler et al. 1968, Joshi et al. 1983, Gringauz et al. 1968, U.S. Patent 3,261,845, Dominianni et al., Chem Abstr. 57, Jolivet 1960, Maruyama et a... 1981, U.S. Patent 3,343,940, Kwart et al. 1952, Berson et al. 1954, and Mel'nikow et al. 1956 identified in search KO are provided as references IK, IL, IE, IG, IM, FO, JN, IP, TQ, IR, BA, IT, IU, and IY or IZ, respectively. U.S. Patent 3,261,845 identified in search KP is provided as reference FO. GB 1039020 identified in search KR is provided as reference GA. JP 7-144477, CN 1050877, DE 2365677, U.S. Patent 3,906,102, and U.S. Patent 3,925,554 identified in search KS are provided as references FX, FY, FZ, FP, and FO respectively. Applicants provided these search results in an earnest effort to provide the Examiner with the opportunity to consider the same information that was considered by the Applicants. See MPEP 609. However, should the Examiner maintain that the search results of KA, KB, KO, KP, KR and KS will not be considered, Applicants have still clearly met their duty of disclosure since references identified therein, which were obtained by Applicants based on

these search results, were also provided with the IDS.

IV. Rejection of Claims 1-7 and 9 under 35 U.S.C. 112, first paragraph

Claims 1-7 and 9 have been rejected under 35 U.S.C. 112, first paragraph. The Examiner has acknowledged the specification to be enabling for the atomic structural coordinate listing (Table A) of an androgen receptor-ligand binding domain (AR-LBD). However, the Examiner suggests that the specification does not reasonably provide enablement for a method of inhibiting the growth of hormone dependent tumor cells by administering any selective androgen receptor modulator that interacts with any androgen receptor complex.

Applicants respectfully traverse this rejection.

At the outset, Applicants respectfully disagree with the Examiner's characterization of the claimed invention. Contrary to the Examiner's suggestion, claims of the instant application are not drawn to administering any selective androgen receptor modulator that interacts with any androgen receptor complex, but rather are drawn to administering a selective androgen receptor modulator which exhibits antagonist activity in a hormone-dependent tumor while

exhibiting no activity or agonist activity against other, nontumor tissues containing the androgen receptor. In accordance with MPEP 2164, it is this claimed invention that one skilled in the art must be enabled to make and use for the application to meet the enablement requirements of 35 U.S.C. 112, first paragraph.

Multiple methods, in addition to that acknowledged by the Examiner to be enabling for the atomic structural coordinate listing (Table A) of an androgen receptor-ligand binding domain, (AR-LBD) are set forth in the specification to make and/or identify selective androgen receptor modulators (SARMS) for use in the present invention which exhibit antagonist activity in a hormone-dependent tumor while exhibiting no activity or agonist activity against other, nontumor tissues containing the androgen receptor.

The Examiner is respectfully directed to page 8, line 13 to page 9, line 5 of the instant specification wherein methods are taught for ascertaining antagonist activity in hormone-dependent tumors via screening for inhibition of growth *in vitro* in hormone-dependent tumor cell lines. As taught in the specification and evidenced by the multiple references cited at this section of the application, screening in these cell

lines is well accepted by those skilled in the art as indicative of the pharmacology of human hormone-dependent tumors. The Examiner is also respectfully directed to page 9, lines 6-21 of the specification wherein methods are taught for ascertaining no activity or agonist activity *in vitro* in normal nontumor cell lines. Also, see page 9, line 22 through page 10, line 20 of the specification wherein *in vivo* models widely recognized as having a direct correlation to the effects of the agents on the AR Pathways are taught for identifying SARMs for use in the claimed methods.

Additional details regarding use of these *in vitro* and *in vivo* models are set forth in the Examples 3 through 13 at pages 85-98 of the instant specification.

The Examiner is further directed to page 21 of the specification beginning at line 5 wherein preferred SARMs for use in the claimed methods of the present invention are defined by their activity in these *in vitro* and *in vivo* models.

Further, as taught beginning at page 44 page, line 2 of the instant specification, it was these *in vitro* and *in vivo* assays that were used by Applicants to identify exemplary

SARMs set forth in the application and used in the claimed methods.

Clearly, the specification is enabling for alternative methods, in addition to the method relating to the atomic structural coordinate listing (Table A) of an androgen receptor-ligand binding domain (AR-LBD), to make/identify SARMs which exhibit antagonist activity in a hormone-dependent tumor while exhibiting no activity or agonist activity against other, nontumor tissues containing the androgen receptor and to use such SARMs in the claimed invention.

Accordingly, withdrawal of this rejection under 35 U.S.C. 112, first paragraph is respectfully requested.

Claim 9 is further rejected under 35 U.S.C. 112, first paragraph, because the Examiner suggests that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with this claim. The Examiner has acknowledged the specification to be enabling for SARM compounds that were tested *in vitro* and *in vivo* to determine whether treatment was effective in remedying a condition in prostate tumors and various cell lines as seen in the Examples. However, the Examiner suggests that the

specification does not reasonably provide enablement for a method of treatment of all conditions listed in claim 9 by administering a selective androgen receptor modulator in an effective way.

Applicants respectfully disagree.

The test of enablement, as set forth in MPEP 2164.01, is whether one reasonably skilled in the art could make and use the invention from the disclosure in the patent coupled with information known in the art without undue experimentation. In accordance with MPEP 2164.01(c), when one skilled in the art, based on knowledge of compounds having similar physiological or biological activity can discern an appropriate method of use without undue experimentation, this is sufficient to satisfy 35 U.S.C. 112, first paragraph.

In the instant application, Applicants have demonstrated through multiple *in vitro* and *in vivo* experiments the ability of exemplary SARMs of the present invention to bind to the androgen receptor and inhibit or antagonize its function in hormone-dependent tumors while exhibiting agonist activity against other, nontumor tissues containing the androgen receptor. See in particular page 44-46 of the instant specification and Examples 3-13. Such evidence of

pharmacological activity is clearly supportive of the use of these SARMs in additional known androgen-receptor mediated disorders as set forth in claim 9, particularly since modulation of androgen receptor function is an established therapeutic strategy for treatment of such conditions.

Thus, one skilled in the art could make and use the invention as set forth in claim 9 without undue experimentation.

Therefore, the instant specification meets the enablement requirements of 35 U.S.C. 112, first paragraph, with respect to claim 9 and withdrawal of this rejection is respectfully requested.

V. Rejection of Claims 1-7 and 9 under 35 U.S.C. 112, second paragraph

Claims 1-7 and 9 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

In particular, claim 1 is suggested to be vague and indefinite because, in line 4, the phrase "exhibits antagonist activity" does not include sufficient antecedent basis as to

what the antagonist activity is directed against. Accordingly, in an earnest effort to advance the prosecution of this case, Applicants have amended claim 1 to clarify that the antagonistic activity is directed against growth of the hormone-dependent tumor. Support for this amendment can be found throughout the specification, for example, at page 4, lines 5-7, page 7, lines 17-20 and page 8, lines 16-18.

Claim 9 is also rejected as vague and indefinite due to its reference to a non-elected claim. Accordingly, in an earnest effort to advance the prosecution of this case, claim 9 has been amended to be independent. Support for the amendment to claim 9 is provided in claim 8, now canceled.

Claim 9 has also been amended to provide the full name of VEGF as vascular endothelial growth factor in accordance with the Examiner's suggestion and the well known use of this abbreviation.

Withdrawal of these rejections under 35 U.S.C. 112, second paragraph, is respectfully requested in light of these amendments which make explicit what was implicit in the original claims.

VI. Rejection of Claims 1-7 and 9 under 35 U.S.C. 103

Claims 1-7 and 9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Thorpe et al. (U.S. Patent 6,004,554) in view of Zhi et al. (U.S. Patent 6,358,947) and Li et al. (U.S. Patent 6,469,024). The Examiner suggests that it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the administration of selective androgen receptor modulators (as stated by Zhi et al. and Li et al.) in the methods of inhibiting and treating prostate tumor cells (as stated by Thorpe et al) with a reasonable expectation of success. The Examiner suggests that motivation to do so is given by Thorpe et al. who teach that developing successful antitumor agents via selective target agents and the teaching of Zhi et al. and Li et al. relating to compounds that target androgen receptors.

Applicants respectfully traverse this rejection.

At the outset, Applicants respectfully disagree with the Examiner's characterization of the Zhi et al. and Li et al. patents as teaching selective androgen receptor modulators. Both the specification and claims of the instant application

clearly require a SARM for use in the present invention to exhibit antagonist activity in hormone-dependent tumors while exhibiting no activity or agonist activity against other, nontumor tissues containing the androgen receptor. Neither Zhi et al. nor Li et al. teach such compounds.

Zhi et al. describe nonsteroidal compounds that are primarily high affinity, highly selective modulators of progesterone receptors, not androgen receptors. While there is mention that these compounds may modulate a process mediated by an androgen receptor (see claim 4), it is clear from teachings at column 4, lines 35-48, of this patent, that such activity is secondary to its progesterone receptor modulating ability. Accordingly, the compounds of Zhi et al. are clearly not SARMs as defined in both the detailed description and claims of the instant application.

Li et al. describe tetrahydroisoquinoline analogs for stimulating endogenous production and/or release of growth hormone. While Li et al. teach at column 44, lines 47-61 that their analogs may be administered in combination with a selective androgen receptor modulator such as taught by Edwards, J.P. et al. Bio Med. Chem Let. 9, 1003-1008 (1999) and Hamann, L.G. et al. J. Med. Chem. 42:210-212 (1999), the

analogs taught by Li et al. are not SARMs as defined in the detailed description and claims of the instant application. Nor are the selective androgen receptor modulators of Edwards et al. or Hamann et al. since they do not exhibit antagonist activity in hormone-dependent tumors while exhibiting no activity or agonist activity against other, nontumor tissues containing the androgen receptor. Instead, the compounds disclosed by Edwards et al. and Hamann et al. are demonstrated to have partial agonist activity in an engineered reporter assay in a CV1 (green monkey kidney cells) assay in which both the AR and reporter constructs are transfected into the cell. No data are presented or discussed in either of these references with respect to the effects of these compounds as antagonists that inhibit growth of hormone-dependent tumors.

Accordingly, the secondary references of Zhi et al. and Li et al. cited in this combination of prior art do not remedy the Examiner's acknowledged deficiency in the teachings of Thorpe et al., namely no mention of selective androgen receptor modulators. Thus, the cited combination of prior art fails to provide the requisite motivation or suggestion to arrive at the instant invention; the combination of references

fails to provide any reasonable expectation of success with respect to the instant inventior; and finally, the cited combination fails to teach or suggest all the limitations of the instant claimed invention. Thus, the basic requirements of a *prima facie* case of obviousness, as set forth in MPEP 2143 are not met by this combination of references.

Therefore, withdrawal of this rejection under 35 U.S.C. 103 is respectfully requested.

VII. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,

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Date: June 16, 2003

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English Abstract CG

009108432
WPI Acc No: 1992-235862/199229
Related WPI Acc No: 1994-028044
XRAM Acc No: C92-106330
New anti-androgenic phenylimidazolidine derivs. - for treatment of tumours, benign prostate hyperplasia, hirsutism, acne, seborrhoea and alopecia
Patent Assignee: ROUSSEL-UCLAF (ROUS); HOECHST MARION ROUSSEL (HMRI)
Inventor: GAILLARD-KELLY M; GOUBET F; PHILIBERT D; TEUTSCH J; TEUTSCH J G; PHIBERT D; PHILBERT D
Number of Countries: 025 Number of Patents: 019
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 494819	A1	19920715	EP 92400038	A	19920108	199229	B
AU 9210106	A	19920716	AU 9210106	A	19920108	199236	
FR 2671348	A1	19920710	FR 91185	A	19910109	199237	
CA 2059052	A	19920710	CA 2059052	A	19920108	199239	
HU 60250	T	19920828	HU 9265	A	19920108	199241	
JP 4308579	A	19921030	JP 9219353	A	19920109	199250	
CN 1063102	A	19920729	CN 92100140	A	19920109	199315	
ZA 9200090	A	19930331	ZA 9290	A	19920107	199319	
AU 648376	B	19940421	AU 9210106	A	19920108	199421	
US 5411981	A	19950502	US 92819910	A	19920109	199523	
			US 9364257	A	19930518		
EP 494819	B1	19960710	EP 92400038	A	19920108	199632	
DE 69212007	E	19960814	DE 612007	A	19920108	199638	
			EP 92400038	A	19920108		
ES 2089425	T3	19961001	EP 92400038	A	19920108	199645	
US 5627201	A	19970506	US 92819910	A	19920109	199724	
			US 9364257	A	19930518		
			US 95372648	A	19950113		
RU 2076101	C1	19970327	SU 5010932	A	19920108	199743	
IE 76143	B	19971008	IE 9269	A	19920108	199749	
US 35956	E	19981110	US 92819910	A	19920109	199901	
			US 9364257	A	19930518		
			US 97807760	A	19970227		
KR 238385	B1	20000302	KR 92124	A	19920108	200122	
JP 3383320	B2	20030304	JP 9219353	A	19920109	200319	

Priority Applications (No Type Date): FR 91185 A 19910109; FR 928431 A 19920708
Cited Patents: EP 185961; EP 24570; EP 305270; EP 813; FR 2329276; US 3823240; US 4672101; EP 1813
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 494819	A1	F		C07D-233/86	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL PT SE					
AU 9210106	A			C07D-233/86	
FR 2671348	A1		38	C07D-233/28	
CA 2059052	A	F		C07D-233/66	
HU 60250	T			C07D-233/76	
JP 4308579	A		21	C07D-233/70	
CN 1063102	A			C07D-233/86	
ZA 9200090	A		51	A61K-000/00	
AU 648376	B			C07D-233/86	Previous Publ. patent AU 9210106
US 5411981	A		28	C07D-233/72	CIP of application US 92819910

EP 494819	B1 F	65	C07D-233/86	
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DE 69212007	E		C07D-233/86	Based on patent EP 494819
ES 2089425	T3		C07D-233/86	Based on patent EP 494819
US 5627201	A	22	A61K-031/415	CIP of application US 92819910 Div ex application US 9364257 Div ex patent US 5411981
RU 2076101	C1	17	C07D-233/76	
IE 76143	B		C07D-233/86	
US 35956	E		A61K-031/415	CIP of application US 92819910 Reissue of patent US 5411981
KR 238385	B1		C07D-233/60	
JP 3383320	B2	20	C07D-233/70	Previous Publ. patent JP 4308579

Abstract (Basic): EP 494819 A

Phenyl imdiazolidine derivs. of formula (I) are new. In (I) R1 = CN, NO2 or halogen; R2 = CF3 or halogen; A-B = gp. of formula (i) or (ii); X = O or S; R3 = H, alkyl, alkenyl, alkynyl, aryl, or aralkyl of up to 12C, opt. substd. by one or more of OH, halogen, SH, CN, acyl or acyloxy of up to 7C, S-aryl opt. substd. and in which the S atom may be oxidised, COOH which may be free, esterified, amidified, or salified, NH2, mono- or di-alkylamino, or a 3-6 membered hetercycle which may contains S, O or N atoms, the alkyl, alkenyl or alkynyl gps. may be interrupted by one or more O, N, S, SO, or SO2 groups, and aryl and aralkyl gps. may be substd. by alkyl, alkenyl, alkynyl, alkoxy, alkenyloxy, alkynyloxy, or CF3 gps. Y = O, S or =NH, except for those prods. where A-B is of formula (iii) where X is O, R3 is H, Y is O or NH R2 = halogen or CF3, and R1 = nitro or halogen.

USE - The cpds. inhibit the effect of androgens on peripheral receptors, and may be used to treat prostate adenoma and neoplasia, benign prostate hypertrophy, certain cancers, esp. of the breast, brain, skin, and ovaries, as well as of the bladder, lymphatic system, kidneys, and liver. They may also be used to treat hirsutism, acne, seborrhoae, androgenic alopecia, and hyperpilosity. (45pp Dwg.No.0/0)

Abstract (Equivalent): EP 494819 B

The products of general formula (I): in which: R1 represents a cyano or nitro radical or a halogen atom, R2 represents a trifluoromethyl radical or a halogen atom, the group A-B is chosen from the radicals (i) or (ii); in which X represents an oxygen or sulphur atom and R3 is chosen from the following radicals: a hydrogen atom, alkyl, alkenyl, alkynyl, aryl or arylalkyl radicals having at most 12 carbon atoms, these radicals being optionally substituted by one or more substituents chosen from the following radicals, hydroxy, halogen, mercapto, cyano, acyl or acyloxy having at most 7 carbon atoms, optionally substituted S-aryl, in which the sulphur atom is optionally oxidised in the form of the sulphoxide or sulphone, free, esterified, amidified or salified carboxy, amino, mono- or dialkylamino or a heterocyclic radical having 3 to 6 links and containing one or more heteroatoms chosen from sulphur, oxygen or nitrogen atoms, the alkyl, alkenyl or alkynyl radicals being moreover optionally interrupted by one or more oxygen, nitrogen or sulphur atoms optionally oxidised in the form of the sulphoxide or sulphone, the aryl and aralkyl radicals moreover being optionally substituted by one of the following radicals: alkyl, alkenyl or alkynyl, alkoxy, alkenyloxy, alkynyloxy or trifluoromethyl; Y represents an oxygen or sulphur atom or an =NH radical, with the exception of the products in which the group -A-B-

represents the radical (iii); in which X represents an oxygen atom and R3 represents a hydrogen atom and Y represents an oxygen atom or an NH radical and R2 represents a halogen atom or a trifluoromethyl radical and R1 represents a nitro radical or a halogen atom.

(Dwg.0/0)

Abstract (Equivalent): US 5627201 A

Compounds of formula (I) and their acid addition salts are new.

R1 = -CN, -NO2 or halogen;

R2 = -CF3 or halogen;

-A-B- = -(X=)C-(R3)N- or -C(-S-R3)=N-;

X = -O- or -S-;

R3 = (a) alkyl, alkenyl and alkynyl of up to 6 carbon atoms optionally interrupted by oxygen or optionally oxidised sulphur, phenyl and phenyl(1-6C)alkyl (all substituted by at least one -SH, acyloxy of an aliphatic carboxylic acid up to 7 carbon atoms, -phenyl, -O-phenyl, -O-phenalkyl, halo -S-phenyl, the sulphur being optionally oxidised to sulphone or sulphoxide, or 3-6 membered heterocycle and containing at least one oxygen, sulphur and nitrogen, phenyl and phenalkyl optionally substituted by halogen, -CF3, alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl and alkynyloxy; (b) tri(1-6C)alkylsilyl; (c) acyl and acyloxy of a 1-7C organic carboxylic acid; Y = =O, =S or.

Dwg.0/0

Title Terms: NEW; ANTI; ANDROGENIC; PHENYL; IMIDAZOLIDINE; DERIVATIVE; TREAT; TUMOUR; BENIGN; PROSTATE; HYPERPLASIA; HIRSUTISM; ACNE; SEBORRHOEA; ALOPECIA

Derwent Class: B03

International Patent Class (Main): A61K-000/00; A61K-031/415; C07D-233/28; C07D-233/60; C07D-233/66; C07D-233/70; C07D-233/72; C07D-233/76; C07D-233/86

International Patent Class (Additional): A61K-031/145; A61K-031/41; A61K-031/435; A61K-031/495; A61P-005/28; A61P-013/08; A61P-017/14; A61P-035/00; C07D-233/54; C07D-233/73; C07D-233/84; C07D-233/88; C07D-233/96; C07D-401/12; C07D-403/12; C07D-405/04; C07D-405/06; C07D-405/12; C07D-409/12; C07D-413/12; C07D-417/12

File Segment: CPI

Manual Codes (CPI/A-N): B07-D09; B12-A07; B12-G01A; B12-C07; B12-L05

Chemical Fragment Codes (M2):

01 M710 M781 M903 P611 P617 P633 P930 P943 9229-07601-N

02 M781 M903 P611 P617 P633 P930 P943 9229-07602-U

03 M710 M903 9229-07603-N

English Abstracts FW

FILE 'HCA' ENTERED AT 14:18:29 ON 13 JUN 2003
L1 1 S JP51088631/PN

Record from Chemical Abstracts

L1 ANSWER 1 OF 1 HCA COPYRIGHT 2003 ACS
AN 85:172785 HCA
TI 1-(3 Nitro-5-halogenophenyl)pyrrolidine-2,5-dione derivatives as fungicides
PA Sumitomo Chemical Co., Ltd., Japan
IN Kato, Toshiro; Kameda, Nobuyuki; Hisada, Yoshio; Fujinami, Akira

PATENT NO.	KIND	DATE
JP 51088631	B4	19760803

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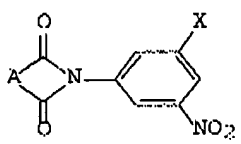

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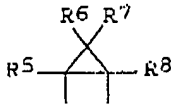

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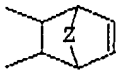

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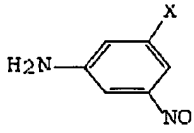


II

AB The title compds. I [X = halogen, A = CR1R2CR3R4, (R1,R2,R3, and R4 = H or lower alkyl), B (R5,R6,R7, and R8 = H or lower alkyl), CR9:CR10 (R9 and R10 = H or lower alkyl), C (Y = O or methylene), and D (Z = O or methylene)] are prepared by condensation of HO2CACO2H with II and used as fungicides. Thus, N-(3-chloro-5-nitrophenyl)succinimide (III) [60545-56-4] was obtained by treating succinic anhydride [108-30-5] with 3-chloro-5-nitroaniline [6283-25-6]. III, sprayed at 1000 ppm on rice, prevented Pellicularia sasakii infection.

FILE 'WPIX' ENTERED AT 14:19:13 ON 13 JUN 2003
L2 1 S L1

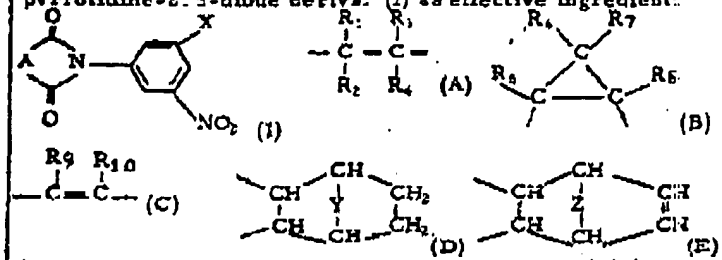
Record from Derwent WPI

L2 ANSWER 1 OF 1 WPIX (C) 2003 THOMSON DERWENT
AN 1976-71175X [38] WPIX Full-text
TI Fungicides containing nitro-halophenyl-pyrrolidione-dione derivs - prepd from dibasic acids or anhydrides and anilines.
PA (SUMO) SUMITOMO CHEM CO LTD
PI JP 51088631 A 19760803 (197638)* <--
JP 53039488 B 19781021 (197846)
PRAI JP 1975-13872 19750131; JP 1977-150940 19780313
DC C02
AB JP 51088631 A UPAB: 19930901
Non-medical fungicides contain 1-(3-nitro-5-halophenyl)-pyrrolidine-2,5- dione derivs. (I) as effective ingredient: (where X = halogen; A = ethylene gp. of formula (A) (where R1, R2, R3 and R4 = H or lower alkyl), cyclopropylene gp. of formula (B) (where R5, R6, R7 and R8 = H or lower alkyl), vinylene gp. of formula (C) (where R9 and R10 = H or lower alkyl), cyclohexylene gp. of formula (D) (where Y = O, methlene), or cyclohexnylene gp. or methylidene ethylene gp. (sic) of formula (E) (where Z = O or methylene). For preparation of (I), dibasic acid (II) or its anhydride is dehydrated and condensed with an aniline (III): (I) has marked controlling action against a wide range of diseases of various kinds of crops.

71175X/38 C02 SUMO 31.01.75
SUMITOMO CHEMICAL KK *JS 1088-631
31.01.75-JA-013872 (03.08.76) A01n-09/22 C07d-207/40 C07d-209/52 C07d-491/08

Fungicides contg. nitro-halophenyl-pyrrolidiene-dione derivs - prepd from dibasic acids or anhydrides and anilines

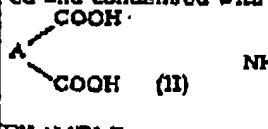
Non-medical fungicides contain 1-(3-nitro-5-halophenyl)-pyrrolidine-2,5-dione derivs. (I) as effective ingredients.



(where X = halogen; A = ethylene gp. of formula (A) (where R_1, R_2, R_3 and R_4 = H or lower alkyl), cyclopropylene gp. of formula (B) (where R_5, R_6, R7 and R8 = H or lower alkyl), vinylene gp. of formula (C) (where R9 and R10 = H or lower alkyl), cyclohexylene gp. of formula (D) (where Y = O, methylene), or cyclohexenylene gp. or methylidene ethylene gp. (sic) of formula (E) (where Z = O or methylene). For

C6-D4, C6-D13, C6-E5, C7-D3, C12-A2, 5 | 29

prepn. of (I), dibasic acid (II) or its anhydride is dehydrated and condensed with an aniline (III):



(I) has marked controlling actio against a wide range of disease of various kinds

EXAMPLE

1,2-Dimethyl-1,2-cyclopropane-dicarboxylic acid, 3.7 g, 4.0 g of 3-chloro-5-nitroaniline, 0.1 g of triethylamine, and 30 ml of xylene were charged in a 500 ml four-spouts flask equipped with a moisture separator and refluxed with agitating for 5 hrs. After the reaction, the xylene was distilled out under vacuum, the resulting crude products being recrystallized from n-hexane-benzene mixed solvent to give N-(chloro-5-nitrophenyl)-1,2-dimethyl-1,2-dicarboxyimide, 2.9g.

71176X/38 C03 (C02) NIPY 29.01.75
NIHON NOYAKU KK *JS 1088-632
29.01.75-JA-011388 (03.08.76) A01n-01/02

Synergistic miticidal compsns - contg. methyl-methylchlorophenyl-quinazolone and dibromo-benzylic acid isopropyl as active ingredients

Synergistic miticidal compsns. consist of (I) 2-methyl-3-(2-methyl-5-chlorophenyl)-4-quinazolone), and (II) 4,4'-dibromobenzylic acid isopropyl, as effective ingredients. The synergism is strong and the compsns. have both excellent ovicidal action and larvae- and adult-killing action, with re idual effect; they are thus markedly effective for controlling resistant mites. Ratio of (I) to (II) can be determined from a wide range; for the miticidal action, pref. (I):(II) = 3:2-1:1.

EXAMPLE

(1) Compound I, 30 parts, 20 parts of compound II, 45 parts of clay, 3 parts of calcium lignin sulfonate, and 2 parts of nonylphenol polyoxyethylene ether were mixed homogeneously and ground to give wettable agent. This was diluted with water to 1,000-1,500 times. (2) Compound (I), 30 parts, 30 parts of compound (II), 35 parts of sodium dodecylbenzene sulfonate, and 2 parts of polyvinyl-alcohol were mixed homogeneously and ground to give wettable powder.

C6-D6, C10-G2, C12-B4, C12-C9, 4 | 3

71177X/38 C01 TSUB 31.01.75
KUMIAI CHEM IND KK *JS 1088-634
31.01.75-JA-013194 (03.08.76) A01n-09/02

Synergistic insecticides controlling resistant nephottix cincticeps - contain mixt. of two specified phosphoro-di-thioates

Insecticides which effectively control resistant Nephotettix cincticeps contain O,O-dimethyl-S-[α(ethoxycarbonyl)-benzyl phosphorodithioate (PAP) and O,O-diisopropyl-S-benzyl phosphorothioate (IBP). PAP is a chemical which is applied on overground parts of plants or bodies of insects but the mixt. of it with IBP can be applied on the surface of the water (sic). The mixt. of PAP and IBP shows strong synergistic effect which is thought to be due to the fact that the carboxyesterase which detoxifies PAP inhibits IBP.

EXAMPLE

1 PAP, 4.0 wt.%, 1.0 wt.% of IBP, 3.0% of kieselguhr, 95.0 wt % of mixture of talc and kaolin were mixed and ground to give dust. 2 PAP, 20 wt %, 20 wt % of IBP, 30 wt % of kieselguhr, 25 wt % of kaolin, 2 wt % of sodium dodecylbenzene sulfonate and 3 wt % of sodium lignin sulfonate were mixed and ground to give wettable powder. This was suspended in water on applic tion. 3 PAP, 25 wt %, 25 wt % of IBP, 35 wt

C5-B1N, C12-C9, C12-N2, 3 | 3

To: Kathy Tyrrell
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6-13-03
1 page.
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